REMARKS

The foregoing amendments and these remarks are in response to the Office Action dated September 9, 2005. This amendment is filed with a Request for Extension of Time and authorization to charge Deposit Account No. 50-0951 for the appropriate fees.

At the time of the Office Action, claims 1-14 were pending. In the Office Action, claim 7 was rejected under 35 U.S.C. §112, first paragraph. Claims 1-14 were rejected under 35 U.S.C. §112, second paragraph. Claims 1-7, 9, 11 and 12 were rejected under 35 U.S.C. §102(e). Claims 10, 13 and 14 rejected under 35 U.S.C. §103(a). The rejections are discussed in more detail below.

I. Claim Rejections under 35 U.S.C. §112

Claim 7 was rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claims 1-14 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 1-14 were rejected under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. Applicant has amended the claims in a manner believed to overcome the rejections, and notes that claim 8 is explained in the specification on page 7, lines 4-13. Withdrawal of the rejections is thus respectfully requested.

II. Rejections on Art

Claims 1-7, 9, 11 and 12 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2004/0039520 to Khavakh et al. ("Khavakh"). Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Khavakh as applied to claim 9, and further in view of U.S. Patent No. 5,170,353 to Verstraete ("Verstraete"). Claims 13 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Khavakh as applied to claim 1, and further in view of U.S. Patent No. 5,610,821 to Gazis et al. ("Gazis").

With regard to claim 1, Applicant has amended the claim so that it is no longer in the European-style "two-part" form. The claim is now believed to clearly recite that two minimal cost paths are developed for each path graph. Amended claim 1 also clearly recites that the development of the two path graphs are interrupted when they comprise at least one first common interference node (P_i). Thus, the two graphs are grown up until a common node is found and two minimal costs are calculated starting from them. There is no similar teaching or suggestion in Kavake, neither in paragraph 122 nor elsewhere in the document. To the contrary, in Kavakh, one graph is developed until a solution route or a predefined threshold (or cost or other criterion) is reached (see paragraphs 139 and 140). If the threshold is reached, the other graph is grown up with the same process.

In Kavakh, the development of the two graphs is not simultaneous (see paragraph 134). Second, one cost is calculated at a time for the purpose of comparison to a threshold, and not for obtaining a minimal cost path between the origin and destination waypoints as required by claim 1 of the present application. Third, the beginning of paragraph 142 of Kavakh indicates that there is no optimization of the solution route for searching a minimal cost path, such that there is no incentive to calculate path costs in order to obtain a minimal cost path connecting two points. Fourth, in Khavakh, the path cost is calculated starting only from the origin waypoint (see paragraph 92, lines 4-6), such that there is no incentive to calculate two cost paths staring from origin and destination waypoints as in claim 1.

Referring now to claim 6 of the present application, Applicant notes that the Office Action states that Khavakh discloses a method in which, given a predefined threshold of number of segments of level m_{inf}, the number of segments of each graph which belong to the lowest level m_{inf} is calculated. When the number of segments of level m_{inf} has reached the threshold for the two graphs, the development of the two graphs is continued, taking into account only the segments which belong to the levels which are strictly higher than the level m_{inf}. This assertion is not correct. In Khavakh, there are several different ways for obtaining rank (or level) suppression. For example, there may be suppressions predetermined at each gate (see paragraph 154). Alternatively, suppressions may be configurable as a function of criterion as enumerated in

paragraphs 156 to 162 (for example, distance, density, and number of nodes). Thus, in Khavakh, the rank suppressions are not obtained using the number of segments of a given level m_{inf}

Khavakh also does not teach the subject matter of claim 9 of the present application. To the contrary, figure 21 of Khavakh relates to special points called focus 143, aimed at orienting the development of trees (see paragraph 100). Thus, they are not developed in a globally concentric manner as claimed in claim 9 of the present application.

In relation to claim 11, in Khavakh, the two path graphs are not developed simultaneously because either inbound (paragraph 134) or outbound (paragraph 135) search trees are grown first. This is not what is claimed in claim 11 of the present application.

Khavakh also does not teach the subject matter of claim 12 of the present application. In particular, Khavakh does not disclose or suggest stopping the expansion of trees once a common node is found.

Concerning claims 13-14 of the present application, is it not obvious to achieve what is recited by these claims by combining Khavakh and Gazis. Neither Khavakh nor Gazis teaches any derivation of a virtual network near road data information ordinary transmitted (as in page 7, lines 4-17 of the present application). None of these references teaches an algorithm other than Dykstra algorithm (and not the so called buckets algorithm, used in the telecommunication domain).

For the foregoing reasons, claim 1 is believed to be relate to patentable subject matter and to be in condition for allowance. The dependent claims are believed allowable for the foregoing reasons, for their dependence upon an allowable base claim, and because of the further features recited.

III. Conclusion

Applicants have made every effort to present claims which distinguish over the prior art, and it is thus believed that all claims are in condition for allowance. Nevertheless, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicants respectfully request reconsideration and prompt allowance of the pending claims.

Respectfully submitted,

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